

# **Navy Advancement Center**

**Web site: <http://www.advancement.cnet.navy.mil>**

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# **Advancement Handbook for Signalman**

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## **PREFACE**

The purpose of the Advancement Handbook is to help you focus your preparation for Navywide advancement-in-rating examinations. The bibliographies (BIBs) together with this handbook form a comprehensive examination study package. Since this handbook provides skill and knowledge components for each paygrade of the Signaller rating, it helps you concentrate your study on those areas that may be tested. This feature will help you get the most out of your study time.

Each page in Parts 1 through 4 of this Advancement Handbook presents general skill areas, specific skill areas, the knowledge factors associated with each skill area, the pertinent references that address each skill, and the subject areas that may be covered on the examination. The skill statements describe the skills you are expected to perform for each paygrade. The skill statements are cumulative; that is, you are responsible for the skills for the paygrade you are competing for, your present paygrade, and all paygrades below.

Although this handbook is very comprehensive, it cannot cover all the tasks performed in the rating. As a result, the advancement examinations may contain questions more detailed than described in the “*Exam Expectations*” section of the skill areas.

Remember that advancement competition is keen, so your keys to advancement include not only comprehensive advancement examination study but also sustained superior performance.

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# Part 1

## Advancement Handbook for SM3

## Advancement Handbook for SM3

General SM <i>Skill Area</i>	<b>Tactical Support</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Locate, identify, and maintain status of ships in formation and aircraft in visual range</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Compute relative and true bearings.</li> <li>• Identify all classes of U.S. Navy and Allied ships.</li> <li>• Rig a merchant ship for contact reports.</li> <li>• Recognize foreign ensigns.</li> <li>• Identify various types of aircraft.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• Signalman, NAVEDTRA 12104-A</li> <li>• Jane's Fighting Ships</li> <li>• Merchant Marine Identification Guide – World</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on determining ship's positions from your own; identifying ships by silhouettes, rigging, and national ensigns; and identifying various types of helicopters and fixed-wing aircraft.

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General SM <i>Skill Area</i>	<b>Tactical Support</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Identify signal flags</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Recognize signal flags and pennants flown from U.S. Navy ships and Allied ships.</li> <li>• Recognize signal flags and pennants flown from merchant vessels.</li> <li>• Determine single flag signal meanings.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• Allied Tactical Publication (ATP) 1, Volume II</li> <li>• International Code of Signals, Pub 102</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on identifying and determining the meaning of signal flags and pennants when they are displayed singly on U.S. Navy ships, Allied ships, and merchant vessels.

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General SM <i>Skill Area</i>	<b>Tactical Support</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Communicate to and from a small boat by various means of communications</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Determine FLAG EIGHT boat signals.</li> <li>• Recognize TAPS/ARC code by flashing light.</li> <li>• Recognize pyrotechnic signals.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• ATP 1, Volume II</li> <li>• Naval Telecommunications Procedures (NTP) 4</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on all methods of communicating between ships and boats using visual signals for day, night, and rescue operations; and participating in small boat operations.

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General SM <i>Skill Area</i>	<b>Tactical Support</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Recognize emergency and distress signals (visual or audio) received from ships and aircraft</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Identify emergency flaghoist and sound signals.</li> <li>• Identify international distress signals.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• ATP 1, Volume II</li> <li>• Navigation Rules, International-Inland</li> <li>• International Code of Signals, Pub 102</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on identifying emergency flaghoist signals and related sound signals, international distress signals, and distress signals given by aircraft in immediate need of landing or directing a ship to a distress scene.



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General SM <i>Skill Area</i>	<b>Tactical Support</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Perform visual identification of signals during underway replenishments (day and night)</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Recognize commodity stations by bunting or station marker light box.</li> <li>• Recognize various underway replenishment signals.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• Naval Warfare Publication (NWP) 4-01.4</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on identifying what commodity is supplied at a station by the station marker; recognizing associated flags used during an underway replenishment including dayshapes and distance markers; identifying what commodity is supplied at a station by the station marker light box; and recognizing flashing light signals that are used during night replenishments.

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General SM <i>Skill Area</i>	<b>Tactical Support</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Perform visual identification of signals during amphibious operations (day and night)</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Recognize flags displayed on small boats during amphibious operations.</li> <li>• Recognize flags flown onboard ships to call small boats alongside.</li> <li>• Recognize lights used at night to identify the function of all amphibious crafts.</li> <li>• Recognize beach signals.</li> <li>• Interpret grid posits.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• NWP 3-02.1</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on identifying flags flown by various small boats; flag signals used to call boats alongside a ship; lights displayed by small boats; beach landing signals; and receiving grid posits to pass on to the coxswain.

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General SM <i>Skill Area</i>	<b>Tactical Support</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Operate Chemical Warfare Directional Detector, AN/KAS-1(A)</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Identify the unit, power source, and carrying case.</li> <li>• Know the characteristics of its operations.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• Naval Ship's Technical Manual (NSTM), SW073-AA-MMO-010</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on operating the power source, contents of the carrying case, and the filter wheel positions; identifying chemical agents the detector is designed to interrogate; and stating the secondary use of the chemical warfare directional detector.

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General SM <i>Skill Area</i>	<b>Navigation</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Take position angles and relative bearings</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Determine position angles.</li> <li>• Distinguish the difference between relative and true bearings.</li> <li>• Determine target angle.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• Signalman, NAVEDTRA 12104-A</li> <li>• Lookout Training Handbook, NAVEDTRA 12968</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on accurately determining positions of aircraft and the relative bearings of contacts; converting relative bearings to true bearings; and determining the target angles of vessels.

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General SM <i>Skill Area</i>	<b>Navigation</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Identify aids to navigation</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Know the difference between IALA-A and IALA-B buoyage system.</li> <li>• Identify the various shapes of buoys.</li> <li>• Identify buoys' meanings by color(s) and light characteristics.</li> <li>• Identify meanings of daymarks and day beacons.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• Dutton's Navigation and Piloting, 14<sup>th</sup> Edition, Chapter 4</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on recognizing buoyage systems used throughout the world; identifying the meanings of various buoys by shapes, light characteristics, daymarks, and day beacons associated with these aids to navigation.

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General SM <i>Skill Area</i>	<b>Navigation</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Identify navigation sound signals</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Recognize various types of sound signals.</li> <li>• Relay navigational sound signals.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• Navigation Rules, International-Inland</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on identifying sound signals for maneuvering, low visibility, and emergencies; and relaying sound signals.

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General SM <i>Skill Area</i>	<b>Navigation</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Apply International and Inland Rules of the Road</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Recognize which vessels should give way in various situations.</li> <li>• Identify navigation lights on vessels.</li> <li>• Identify dayshape signals on vessels.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• Navigation Rules, International-Inland</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on determining which vessels have the right-of-way over other vessels in certain situations; identifying situations by navigation lights shown or dayshapes displayed; and determining minimum distance and arc of visibility of standard navigation lights and special lights.

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General SM <i>Skill Area</i>	<b>Communications</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Hoist and haul down signal flags, pennants, and dayshapes</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Know and use flagbag terminology.</li> <li>• Recognize all signal flags and pennants.</li> <li>• Select appropriate halyards.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• Signalman, NAVEDTRA 12104-A</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on using the proper terminology during flaghoist communications; identifying all parts of signal flags and pennants; and properly displaying flags, pennants, and dayshapes on the appropriate halyards.



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General SM <i>Skill Area</i>	<b>Communications</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Encode and decode signals</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Use the various publications held on the Signal Bridge.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• ATP 1, Volume II</li> <li>• ATP 2, Volume II</li> <li>• International Code of Signals, Pub 102</li> <li>• Allied Communication Publication (ACP) 131</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on determining the meanings of single flags and pennants; and identifying the publications used to encode and decode other signals.

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General SM <i>Skill Area</i>	<b>Communications</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Communicate by semaphore</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Transmit, receive, and relay messages by semaphore.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• ACP 130</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on transmitting, receiving, and relaying messages by semaphore; requesting repetitions; identifying special characters sent in semaphore; and answering a call for semaphore by flashing light or flaghoist.

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General SM <i>Skill Area</i>	<b>Communications</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Communicate by flashing light</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Transmit, receive, and relay messages by flashing light (directional and nondirectional).</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• ACP 130</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on transmitting, receiving, or relaying messages by any means of flashing light; requesting repetitions; recognizing special prosigns used in flashing light; and modifying your light during special operations.

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General SM <i>Skill Area</i>	<b>Communications</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Prepare and handle various types of visual message traffic</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Read and draft basic message format.</li> <li>• Route messages in accordance with the Signal Bridge Standard Operating Procedures.</li> <li>• Complete a service cross.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• ACP 130</li> <li>• NTP 4, Chapter 8</li> <li>• Signelman, NAVEDTRA 12104-A</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on preparing a message for transmission by any visual means using the message format outline; routing and disseminating messages according to precedence; using various types of service messages; properly servicing a message; and completing a service cross.

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General SM <i>Skill Area</i>	<b>Communications</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Perform International communications</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"><li>• Communicate by established international procedures.</li></ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"><li>• International Code of Signals, Pub 102</li></ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on performing communication procedures by flaghoist, flashing light, and radiotelephone when communicating with merchant vessels.

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General SM <i>Skill Area</i>	<b>Communications</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Conduct Allied communications</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Communicate using Allied procedures.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• ATP 1, Volume II</li> <li>• ACP 130</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on conducting communication procedures with U.S. Allies including governing pennants/groups, time signals, supplementary tables, information signals, speed flags, substitutes, and maneuvering signals.

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General SM3 <i>Skill Area</i>	<b>Communications</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Interpret visual call signs</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Recognize, encode, and decode various types of visual call signs.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• ACP 113</li> <li>• ACP 130</li> <li>• NTP 4</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on identifying call signs that you will find in the heading of visual messages; determining a call sign when given the title of a command or an officer; and determining the publications used to find certain call signs.

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General SM <i>Skill Area</i>	<b>Communications</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Identifying convoy signaling</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Communicate using convoy signaling procedures.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• ATP 2, Volume II</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on identifying signal flags used in convoy operations; and recognizing special call signs used in convoy formations.



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General SM <i>Skill Area</i>	<b>Communications</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Perform emergency communications</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Communicate during emergency situations.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• ATP 1, Volume II</li> <li>• ACP 130</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on properly displaying, transmitting, and sounding emergency signals.

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General SM <i>Skill Area</i>	<b>Communications</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Perform communications using the Incident at Sea Agreement (INCSEA)</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Transmit, receive, and answer signals by the Incident at Sea Agreement.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• NTP 4</li> <li>• International Code of Signals, Pub 102</li> <li>• INCIDENT AT SEA INSTRUCTIONS BETWEEN UNITED STATES AND FORMER SOVIET UNION WARSHIPS, OPNAVINST 5711.96</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on properly transmitting, receiving, and answering a flaghoist signal using the INCSEA agreement.

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General SM <i>Skill Area</i>	<b>Equipment</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Maintain signal halyards</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"><li>• Demonstrate proper care of halyards, snaps and rings, and blocks.</li></ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"><li>• Signalman, NAVEDTRA 12104-A</li></ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on the procedures for inspecting, replacing, removing, and splicing halyards; replacing snaps and rings; and properly using halyard blocks.

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General SM <i>Skill Area</i>	<b>Equipment</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Inspection of pyrotechnic signaling kits</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"><li>• Recall procedures to fire a flare using the MK 135 signaling kit properly and safely.</li></ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"><li>• NSTM, SW050-AB-MMA-010 (pages 5-55 through 5-57)</li></ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on the procedures leading up to firing a flare and the associated safety precautions.

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General SM <i>Skill Area</i>	<b>Equipment</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Maintain and use 12" searchlights</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Demonstrate the ability to clean, maintain, adjust, and test/operate 12" incandescent and mercury-xenon searchlights properly.</li> <li>• Replace 12" searchlight components.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• NSTM, S9086-N2-STM-010, Chapter 422</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on performing daily maintenance; test components; replacing lamps; and testing the operating capabilities of the 12" searchlights.

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General SM <i>Skill Area</i>	<b>Equipment</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Maintain and use ship's mounted and hand-held binoculars</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Clean and inspect ship's mounted and hand-held binoculars.</li> <li>• Maintain and use binoculars.</li> <li>• Describe the limitations of the binoculars.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• NSTM, S9421-AA-MMA-010/MK3 Mod 4, 5</li> <li>• Signalman, NAVEDTRA 12104-A</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on performing daily maintenance; making adjustments; and describing limitations of the ship's binoculars and hand-held binoculars.

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General SM <i>Skill Area</i>	<b>Equipment</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Use night vision sights</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Clean, test, and inspect night vision sights.</li> <li>• Maintain and use night vision sights.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• NSTM, SW215-AF-MMO-010</li> <li>• NSTM, SW215-AP-MMO-010</li> <li>• NSTM, SW215-AU-MMO-010</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on performing daily maintenance and operations of the AN/PVS-8, AN/PVS-5, and AN/PVS-11A night vision sights.

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General SM3 <i>Skill Area</i>	<b>Equipment</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Properly use the multipurpose signal light</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Clean and inspect multipurpose signal light.</li> <li>• Maintain and operate the multipurpose signal light.</li> <li>• Test and replace components of the multipurpose signal light.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• Signelman, NAVEDTRA 12104-A</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on performing daily maintenance; testing components; replacing lamps and batteries; and operating the multipurpose signal light.



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General SM <i>Skill Area</i>	<b>Equipment</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Operate Chemical Warfare Directional Detector</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Clean and perform planned maintenance.</li> <li>• Test and purge unit.</li> <li>• Operate the unit.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• NSTM, SW073-AA-MMO-010</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on performing daily maintenance; testing and purging the unit; identifying the parts of the unit; and explaining how to use each component.

## Advancement Handbook for SM3

General SM <i>Skill Area</i>	<b>Equipment</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Operate yardarm blinkers</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Maintain the yardarm blinker system.</li> <li>• Operate the system.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• NSTM, EE810-AA-OMI-010/82X1-SAT 2, A, B</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on performing required maintenance and operating the yardarm blinker system.

## Advancement Handbook for SM3

General SM <i>Skill Area</i>	<b>Equipment</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Maintain dayshape covers</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Inspect dayshape covers for wear.</li> <li>• Perform basic sewing operations.</li> <li>• Select the proper material to replace or manufacture a dayshape cover.</li> <li>• Manufacture dayshapes within specifications.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• Navigation Rules, International-Inland</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on maintaining the covers and identifying dimensions of dayshapes.

## Advancement Handbook for SM3

General ~ <i>Skill Area</i>	<b>Equipment</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Maintain flagbag fingers</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Perform basic mechanical maintenance on fingers in flagbag.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• Signalman, NAVEDTRA 12104-A</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about cleaning, inspecting, maintaining, and replacing flagbag fingers.

## Advancement Handbook for SM3

General ~ <i>Skill Area</i>	<b>Equipment</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Maintain flags, pennants, and bunting</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Demonstrate the ability to design, manufacture, clean, repair and air bunt signal flags and pennants properly.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• NTP 13</li> <li>• Signalman, NAVEDTRA 12104-A</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on mending flags and pennants; performing the proper procedure to clean and dry flags and pennants; and manufacturing special flags and pennants.

## Advancement Handbook for SM3

General SM <i>Skill Area</i>	<b>Honors and Ceremonies</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Dress and full dress ship</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Properly display ensigns and personal flags or pennants.</li> <li>• Display the rainbow of colors.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• NTP 13</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on hoisting procedures for the U.S. ensign or a foreign ensign during dress ship; displaying personal flags and pennants according to the number of masts; and sequencing the rainbow of colors in full dress ship.

## Advancement Handbook for SM3

General SM <i>Skill Area</i>	<b>Honors and Ceremonies</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Rendering Honors</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Determine who is entitled to honors.</li> <li>• Demonstrate the different methods of rendering honors.</li> <li>• Identify when honors should be rendered.</li> <li>• Identify when honors should be suspended.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• U.S. Navy Regulations, Chapter 12</li> <li>• NTP 13</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on determining if an individual or unit is entitled to honors; determining how those honors should be rendered; identifying when they should be rendered; and identifying when to dispense from rendering honors.

## Advancement Handbook for SM3

General SM <i>Skill Area</i>	<b>Honors and Ceremonies</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Identify and display personal flags and pennants</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Recognize and display personal flags and pennants.</li> <li>• Apply rules governing personal flags and pennants display.</li> <li>• Recognize and display award pennants.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• U. S. Navy Regulations, Chapter 12</li> <li>• NTP 13</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on identifying personal flags and pennants; determining where and when they should be displayed; and applying the rules regarding proper displaying of award pennants, both afloat and ashore.



## Advancement Handbook for SM3

General SM <i>Skill Area</i>	<b>Honors and Ceremonies</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Execute sunrise, morning and evening colors</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Properly execute sunrise and colors.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• U.S. Navy Regulations, Chapter 12</li> <li>• NTP 13</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on determining when and how the PREP pennant is displayed as well as other required flags and pennants during sunrise and morning and evening colors.

## Advancement Handbook for SM3

General SM <i>Skill Area</i>	<b>Honors and Ceremonies</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Display and maintain the U.S. national flag/ensign and union jack</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Properly display the U.S. national flag/ensign and union jack.</li> <li>• Properly repair, preserve, or destroy the U.S. national flag/ensign.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• NTP 13</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on properly displaying the U. S. ensign in any event; indicating how the union jack follows the motion of the ensign; performing proper care, preservation, and destruction of the U.S. national flag/ensign.

## Advancement Handbook for SM3

General SM <i>Skill Area</i>	<b>Honors and Ceremonies</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Display the United Nations flag</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Properly display the United Nations flag.</li> <li>• Use the rules of the governing authority.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• NTP 13</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on identifying the United Nations flag; displaying it by itself or along with other national flags or ensigns either ashore or afloat; and what rules governing the proper use of the United Nations flag.

## Advancement Handbook for SM3

General SM <i>Skill Area</i>	<b>Technical Administration</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Utilize visual log and station files</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Describe appropriate entries made in the visual log.</li> <li>• Demonstrate the proper procedures for filing messages in the visual station file.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• NTP 4, Chapter 8</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on making the appropriate entries in the visual log; properly filing messages in the visual station file; and indicate messages and how they interact with the visual log.

## Advancement Handbook for SM3

General SM <i>Skill Area</i>	<b>Technical Administration</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Prepare an aloft chit</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Demonstrate how to run an aloft chit properly.</li> <li>• Recognize safety precautions when people are working aloft.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• NAVY OCCUPATIONAL SAFETY AND HEALTH PROGRAM MANUAL FOR FORCES AFLOAT, OPNAVINST 5100.19C, Chapter C8</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on the personnel who sign and authorize an aloft chits; and identifying how many people are required; and following applicable safety precautions.

## Advancement Handbook for SM3

General SM <i>Skill Area</i>	<b>Technical Administration</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Review operational orders and plans</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Recognize operational orders and plans.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• NWP 5-01</li> <li>• Signalman, NAVEDTRA 12104-A</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on recognizing the type of information that is included in operational orders and plans; and identifying what sections of these plans are pertinent to the Signal Bridge.

## Advancement Handbook for SM3

General SM <i>Skill Area</i>	<b>Technical Administration</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Review communication publications</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>Recall the contents of communications publication.</li> <li>Demonstrate how to enter corrections and changes to communication publications properly.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>NTP 4, Chapters 1 and 8</li> <li>Signalman, NAVEDTRA 12104-A</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on reviewing the contents of a specific publication or in a chapter; identifying how to annotate a correction to a publication properly; identifying how to enter a change to a publication; identifying the originator of these corrections and changes; and determining the effective date of changes and corrections.

## Advancement Handbook for SM3

General SM <i>Skill Area</i>	<b>Technical Administration</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Conduct watch-to-watch inventory</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Properly conduct a watch-to-watch inventory.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• NTP 4, Chapter 5</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on properly conducting an inventory; identifying when to conduct an inventory; determining the personnel to conduct the inventory; and determining when a page count is required.



## Advancement Handbook for SM3

General SM <i>Skill Area</i>	<b>Technical Administration</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Review Signal Bridge standard operating procedures</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>Recall the contents of standard operating procedures.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>NTP 4, Chapter 8</li> <li>Signalman, NAVEDTRA 12104-A</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on identifying who writes the standing operating procedures; examining the contents within the standing operating procedures; and identifying who signs the standing operating procedures.

## Part 2

### Advancement Handbook for SM2

## Advancement Handbook for SM2

General SM <i>Skill Area</i>	<b>Communications</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Prepare contact reports</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"><li>• Identify merchant ships.</li></ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"><li>• Merchant Marine Identification Guide (World)</li></ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on the information required for a merchant ship sighting report; identifying ships by general appearance and upright sequence; and recognizing stack markings and logotypes.

## Advancement Handbook for SM2

General SM <i>Skill Area</i>	<b>Technical Administration</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Maintain visual log and station files</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Describe the appropriate safeguarding of the visual log and station files.</li> <li>• Determine the retention period of the visual log and station files.</li> <li>• Determine how to destroy the material.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• NTP 4, Chapter 8</li> <li>• SECNAVINST 5212.5</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on determining the proper safeguarding of the visual log by the entries logged and the station files by the classification assigned to the messages; identifying the retention period of the visual log by the entries logged and the station files by the content of the text; and identifying the proper methods of destruction.

## Part 3

### Advancement Handbook for SM1

## Advancement Handbook for SM1

General SM <i>Skill Area</i>	<b>Technical Administration</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Prepare Standing Orders</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Recognize emergency signals.</li> <li>• Be familiar with all publications.</li> <li>• Be familiar with the visual log and visual station files.</li> <li>• Perform communication procedures using all means of visual communications.</li> <li>• Be familiar with the duties of inport Signalman.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• NTP 4, Chapter 8</li> <li>• Signalman, NAVEDTRA 12104-A</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on identifying the information included in Standing Orders; recalling who signs the orders and when; and identifying where the orders are maintained.

## Part 4

### Advancement Handbook for SMC

## Advancement Handbook for SMC

General SM <i>Skill Area</i>	<b>Communications</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Transmit and Receive messages via radiotelephone</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Send and receive messages by radiotelephone.</li> </ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• ACP 125</li> </ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on the proper calling and answering procedures; determining types of net being used; using proper prowords; identifying the correct procedures for Beadwindows; and conducting radio checks.



## Advancement Handbook for SMC

General SM <i>Skill Area</i>	<b>Technical Administration</b>
A <i>skill</i> you are expected to perform from the General Skill Area above:	<b>Monitor visual communications procedures</b>
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"><li>• Recognize proper procedures used for all means of visual communications</li></ul>
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"><li>• NTP 4, Chapter 8</li><li>• ACP 130</li></ul>
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on performing the proper procedures for calling, transmitting, receiving, and relaying messages using various types of visual communications.

## Appendix 1

### References Used in This Advancement Handbook

<b>Rating</b>	<b>Short Title</b>	<b>Long Title</b>	<b>Chapters/ Paragraphs</b>	<b>Stocking Point</b>
<b>SM3</b>	ACP 113	Call Sign Book for Ships		Notes 1 & 2
	ACP 125	Communications Instructions Radiotelephone Procedures		Notes 1 & 2
	ACP 130	Communications Instructions Signaling Procedures in the Visual Medium		Notes 1 & 2
	ACP 131	Communications Instructions Operating Signals		Notes 1 & 2
	ATP 1, Volume II	Allied Maritime Tactical Signal and Maneuvering Book		Notes 1 & 2
	ATP 2, Volume II	Allied Naval Control of Shipping Manual Guide to Masters		Notes 1 & 2
	COMDTINST M16672.2	Navigation Rules, International-Inland		Notes 3 & 4
	DUTTON'S	Dutton's Navigation and Piloting	Chapter 4	Note 5
	EE810-AA-OMI- 010/82X1-SAT 2,A,B	Infrared Transmitting Sets Technical Manual		Note 1
	JANE'S	Jane's Fighting Ships	Ensigns and Flags of the World's Navies	Note 5
	NAVEDTRA 12104-A	Signalman Training Manual		Note 1
	NAVEDTRA 12968	Lookout Training Handbook		Note 1
	NIC-2050G-001-90	Merchant Marine Identification Guide- World	Pages xii-xiv & xxiii-xxv	Note 6
	NTP 4	Fleet Communications	Chapters 1, 5, & 8	Note 7
	NTP 13	Flags, Pennants & Customs		Note 7

	NWP 3-02.1	Ship-to-Shore Movement	Appendixes A, C, & D	Notes 1 & 8
	NWP 4-01.4	Underway Replenishment	Chapter 2	Notes 1 & 8
	NWP 5-01	Naval Operational Planning		Notes 1 & 8
	OPNAVINST 5100.19	Navy Occupational Safety and Health Program Manual for Forces Afloat	Chapter C8	Note 9
	OPNAVINST 5711.96	U.S./USSR Incidents at Sea and Dangerous Military Activities Agreements		Note 9
	PUB 102	International Code of Signals		Note 3
	SECNAVINST 5212.5	Navy and Marine Corps Records Disposition Manual		Note 9
	S9086-N2-STM-010	Navigation and Signal Lights Technical Manual	Chapter 422	Note 1
	S9421-AA-MMA-010, MK3 MOD 4,5	Ship Binocular 20 Power Technical Manual		Note 1
	SW050-AB-MMA-010	Pyrotechnic, Screening, Marking, and Countermeasure Devices Technical Manual	Pages 5-55 through 5-57	Note 1
	SW073-AA-MMO-010	Chemical Warfare Directional Detector Technical Manual		Note 1
	SW215-AF-MMO-010	Night Vision Goggles Technical Manual, AN/PVS-5A, B, C		Note 1
	SW215-AP-MMO-010	Long-Range Night Vision System (AN/PVS-8) (Shipboard Mounted) Technical Manual		Note 1
	SW215-AU-MMO-010	Night Vision Pocketscope Operator's Manual, AN/PVS-11A		Note 1
		United States Navy Regulations	Chapter 12	Note 1

**LEGEND:**

Note 1 – To order, MILSTRIP to NAVICP PHILA (Stk No. from NAVSUP P2002)  
or via INTERNET <http://www.nll.navsup.navy.mil>

Note 2 – See your Command NWP Custodian

Note 3 – National Imagery & Mapping Agency (NIMA), CATP2V01U, Customer  
Help Desk: 1-800-455-0899; DSN: 490-1236; Coml (314) 260-1236

Note 4 – INTERNET <http://www.uscg.mil.vtm/pages/rules.htm>

Note 5 – Commercial Purchase

Note 6 – Defense Information Agency Register (DIAR) 59-1

Note 7 – Download or order as directed by ALCOM 062/98

Note 8 – NTIC Series B1 (CD-ROM) (See your Command NWP Custodian)

Note 9 – INTERNET <http://neds.nebt.daps.mil>